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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,940	10/02/2003	Randy Hoffman	200208804-1	9724

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EXAMINER

PATEL, ASHOK

ART UNIT PAPER NUMBER

2879

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/677,940	HOFFMAN, RANDY	
	Examiner	Art Unit	
	Ashok Patel	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-63 is/are pending in the application.
- 4a) Of the above claim(s) 40-63 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 7-39 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7 pages</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. Applicant's election with traverse of Group I, species I, in the reply filed on 02/13/2006, is acknowledged. The traversal is on the ground(s) that the search and Examination required for entire application can be made without serious burden. This is not found persuasive because the search requirement for group I and II are not same, as mentioned in the last restriction requirement. The search for Group I is in class 313, whereas the search for Group II is in class 445. As to the species requirement, the instant application discloses three different embodiments, each including exclusively distinct structural arrangements of associated elements, as shown in Figures 2, 5, 6 and 7. The requirement is still deemed proper and is therefore made FINAL. Group I, including species II, III and IV, II and Group II including claims 40-62, are withdrawn from consideration. An action on merits including elected Group I, species including claims 1-39 is as follows.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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3. Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe (USPN 5648181, of record).

Watanabe disclose applicant's claimed electroluminescent device (Figures 1-3) including: an inorganic phosphor (4), a controllable hole injection structures (3, as shown in Figure 1, or 3 and 4 as shown in Figure 2 or 3, 4 and 7 as shown in Figure 3) in contact with the inorganic phosphor, and a controllable electron injection structure (3, as shown in Figure 1, or 3 and 4 as shown in Figure 2 or 3, 4 and 7 as shown in Figure 3) in contact with the inorganic phosphor and separated from the controllable hole injection structure by a recombination region of the inorganic phosphor.

As to claims 2 and 3, although Watanabe does not disclose the first and second applied voltages, application of these voltages is inherent for controlling rate of holes or electrons.

As to claim 6, Watanabe discloses, at col. 1, lines 14-52, different inorganic phosphors which satisfies applicant's claimed group of ZnS, SrS, BaS, CaS, ZnO, ZnSe, GaN and GaP.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 4 and 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe (USPN 5,648,181, of record), as applied above to claim 1.

As to claim 5, as mentioned in the rejection of claims 2 and 3, Watanabe discloses first and second voltages for proper controlling rate of holes or electrons.

As to claims 4 and 5, Although Watanabe does not disclose a third applied voltage for controlling electroluminescent intensity, applying such voltage would have been obvious to one of ordinary skill in the art for optimizing intensity of the luminescence while varying electrical characteristics of associated components.

It has been held that where general conditions of the claim are discovered in the prior art, discovering optimum voltage application among associated components involves only routine skill in the art. In re Aller, 105 USPQ 233.

6. Claims 7-39 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent

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form including all of the limitations of the base claim and any intervening claims.

As to claims 7-20, prior art of the record does not disclose or teach applicant's claimed EL device of entire claim 1 further including hole injection structure and field effect gate structure, as specifically recited in claim 7.

As to claims 21-34, prior art of the record does not disclose or teach applicant's claimed EL device of entire claim 1 further including electron-injection region and field effect gate region, as specifically recited in claim 21.

As to claims 35-39, prior art of the record does not disclose or teach applicant's claimed EL device of entire claim 1 further including the controllable hole injection structure and the controllable electron injection structure, as specifically recited in claim 35.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wu et al, Tomomura et al, Duggal et al and Han each are cited for showing a general structure of an EL device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok Patel

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whose telephone number is 571-272-2456. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ashok Patel
Primary Examiner
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